Incorporating Ultrasound Simulator Sessions into Residency Point-of-Care Ultrasound Training

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OBJECTIVE/PURPOSE OF INNOVATION
• To augment Point-of-Care Ultrasound (POCUS) training utilizing simulator technology to create a controlled and engaging experience.

BACKGROUND
• POCUS is evolving into a necessary multi-disciplinary clinical skill.
• POCUS integration is needed across the education continuum (UME, GME, CME).
• The Wake Forest School of Medicine IM residency developed a multimodal POCUS curriculum that includes didactics, modules, workshops, ultrasound simulators, and supervised clinical scanning.
• Here, we focus on the ultrasound simulator component.

DESIGN
• Participants: 28 IM residents who were part of an advanced ultrasound training pathway
• 2-hour small group training sessions on a high fidelity ultrasound simulator (1 instructor with 2 trainees).

OUTCOMES
• 28 residents completed the ultrasound simulator training.
• All 28 successfully passed the competency assessment.
• 12 of the 28 residents completed a post-session survey 3 months later.
• 90% agreed or strongly agreed the ultrasound simulator training session improved their clinical POCUS skills and their ability to teach POCUS.

CONCLUSIONS AND LESSONS LEARNED
• Encouraged use of POCUS and frequent repetition through various training modalities is an essential part of our learning theory.
• Training using an ultrasound simulator fosters fundamental POCUS concepts and cultivates psychomotor and cognitive skills.
• Ultrasound simulators allow pathology recognition in a risk-free environment.
• Simulators offer reproducible teaching, practice, and evaluation opportunities.

FEASIBILITY AND GENERALIZABILITY
• Ultrasound is a commonly used diagnostic tool across medical disciplines.
• Utilizing ultrasound simulation technology to augment POCUS training in the clinical, didactic, and workshop setting is generalizable to all medical fields across the education continuum.
• Institutional access to an ultrasound simulator influences feasibility.

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